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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/731,202

12/10/2003

Martin M. Liphardt

4605

7590

02/09/2006

JAMES D. WELCH  
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EXAMINER

MERLINO, AMANDA H

ART UNIT

PAPER NUMBER

2877

DATE MAILED: 02/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/731,202	Applicant(s) LIPHARDT ET AL.	
	Examiner Amanda H. Merlino	Art Unit 2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 1/11/06.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 rejected under 35 U.S.C. 103(a) as being unpatentable over Obenreder (3,857,637) in view of Chanley (5,298,974).

Obenreder teaches of a method of investigating a sample in accordance with figure 3 which comprises a substrate (21) with a thin film coating (col 4; lines 41) with a beam of electromagnetic radiation (17) which impinges at an oblique angle of incident (col 3; lines 8-10), said method eliminating the effects of reflection from the backside of said substrate (21) (col 4; lines 23-29) by placing a shield having a hole upon the surface of the substrate wherein the incident beam (17) reflects from the surface of the substrate (17), said reflected beam having no component therein which reflected from the backside of said substrate (17) and further comprising the step of analyzing the reflected beam. Obenreder also teaches that it is well known in the art that a beam striking a surface is reflected from the top surface and from the opposed surface thereto and that the distance between the reflected beam from the opposed surfaces depends on the angle of incident, the index of refraction of the glass and the thickness of the glass (col 4; lines 11-18).

Obenreder et al lacks the teaching of the effective radius of the hole on the shield being of a specific value as shown by the equation  $D \leq 2T \tan(\theta')$  and the shield being in contact with the substrate.

Chanley teaches of the shield being in contact with the substrate.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to place the shield in contact with the substrate as taught by Chanley to achieve a more compact apparatus.

Even though the equation to calculate the effective radius of the hole on the shield is not specifically taught by Obenreder nor Chanley, they do teach of all the variables of the equation (angle of incident, index of the refraction of the substrate, the thickness of the substrate etc..) being needed to calculate the effective radius of the hole on the shield to block the reflections from the backside of the substrate and thus one of ordinary in the art would have been able to derive the equation by using trigonometry.

Claims 2 rejected under 35 U.S.C. 103(a) as being unpatentable over Chandley (5,298,974).

Chandley teaches of a method of investigating a sample in accordance with figures 1 and 2 which comprises a substrate with a beam of electromagnetic radiation from light source (1) which impinges at an oblique angle of incident, said method eliminating the effects of reflection from the backside of said substrate by placing two plates (5 and 6) having a hole in direct contact with the surface of the substrate (col 5; lines 9-13) wherein the incident beam reflects from the surface of the substrate, said

reflected beam having no component therein which reflected from the backside of said substrate and further comprising the step of analyzing the reflected beam.

Chanley lacks the teaching of the effective radius of the hole between the plates being of a specific value as shown by the equation  $D \leq 2T \tan(\theta')$ .

At the time of the invention, it would have been obvious to one of ordinary skill in the art to calculate the effective radius of the hole between the plates using the equation since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-2 have been considered but are moot in view of the new ground(s) of rejection.

### **Conclusion**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

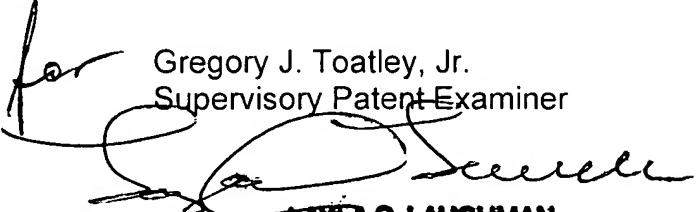
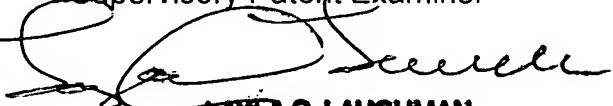
extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amanda H. Merlino whose telephone number is 571-272-2421. The examiner can normally be reached on Monday and Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on 571-272-2800 ext 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Amanda H Merlino  
Patent Examiner  
Art Unit 2877  
February 1, 2006

  
for Gregory J. Toatley, Jr.  
Supervisory Patent Examiner  
  
**LAYLA G. LAUCHMAN**  
**PRIMARY EXAMINER**